

CLAIMS

I claim:

1 1. A system for marking a digital recording, wherein the digital
2 recording includes a plurality of tracks, the system comprising:
3 a mechanism for dividing the digital recording into a
4 plurality of first sections interleaved with a plurality of
5 second sections;
6 a mechanism for calculating an identifier as a function of
7 data contained in each of the plurality of first sections; and
8 a watermarking mechanism for watermarking each of the
9 plurality of second sections with information related to the
10 identifier.

1 2. The system of claim 1, wherein the each of the plurality of
2 first sections are interleaved in an alternating manner with
3 each of the plurality of second sections.

1 3. The system of claim 1, further comprising a splitting
2 mechanism for splitting the identifier into m parts such that
3 each of the m parts comprises information related to the
4 identifier.

1 4. The system of claim 3, wherein a set of m second sections
2 form a group, and each second section within the group receives
3 a unique one of the m parts of the identifier.

1 5. The system of claim 1, wherein the identifier is calculated
2 as a hash of the data contained in the plurality of first
3 sections.

1 6. The system of claim 1, wherein the digital recording
2 includes a music recording, and the plurality of tracks include
3 individual songs.

1 7. The system of claim 1, wherein a length of each section is
2 less than a length of each track, and the number of sections is
3 greater than the number of tracks.

1 8. A system for verifying a digital recording, comprising:
2 a mechanism for reading a plurality of first sections from
3 the digital recording and calculating a first verification
4 identifier from data contained in the plurality of first
5 sections;
6 a mechanism for reading watermarks from each of a plurality
7 of second sections from the digital recording;
8 a mechanism for determining a second verification
9 identifier from at least one of the watermarks; and
10 a mechanism for comparing the first verification identifier
11 and the second verification identifier.

1 9. The system of claim 8, wherein the second verification
2 identifier is determined by coalescing a set of m watermarks
3 read from the digital recording.

1 10. The system of claim 8, wherein the first verification
2 identifier is calculated as a hash of the plurality of first
3 sections.

1 11. The system of claim 8, wherein the plurality of first
2 sections and plurality of second sections are interleaved in an
3 alternating manner.

1 12. The system of claim 8, further comprising a mechanism for
2 terminating a process when the first verification identifier and
3 the second verification identifier are unequal.

12. The system of claim 8, further comprising a mechanism for
terminating a process when the first verification identifier and
the second verification identifier are unequal.

1 13. A program product stored on a recordable media for marking
2 a digital recording having a plurality of tracks that, when
3 executed, comprises:

4 means for dividing the digital recording into a plurality
5 of first sections interleaved with a plurality of second
6 sections;

7 means for calculating an identifier as a function of data
8 contained in each of the plurality of first sections; and

9 means for watermarking each of the plurality of second
10 sections with information related to the identifier.

1 14. The program product of claim 13, further comprising means
2 for splitting the identifier into m parts such that each of the
3 m parts comprises information related to the identifier.

1 15. The program product of claim 14, wherein a set of m second
2 sections form a group, and each second section within the group
3 is watermarked with a unique one of the m parts of the
4 identifier.

1 16. The program product of claim 13, wherein the identifier is
2 calculated as a hash of the data contained in the plurality of
3 first sections.

1 17. A program product stored on a recordable media for
2 verifying a digital recording that, when executed, comprises:
3 means for reading a plurality of first sections from the
4 digital recording and calculating a first verification
5 identifier from data contained in the plurality of first
6 sections;
7 means for reading watermarks from each of a plurality of
8 second sections from the digital recording;
9 means for determining a second verification identifier from
10 at least one of the watermarks; and
11 means for comparing the first verification identifier and
12 the second verification identifier.

1 18. The program product of claim 17, wherein the second
2 verification identifier is determined by coalescing a set of m
3 watermarks read from the digital recording.

1 19. A method for processing a digital recording, the method
2 comprising:

3 marking the digital recording with the steps of:

4 dividing the digital recording into a plurality of
5 first sections interleaved with a plurality of second
6 sections;

7 calculating an identifier as a function of data
8 contained in each of the plurality of first sections; and

9 watermarking each of the plurality of second sections
10 with information related to the identifier.

1 20. The method of claim 19, wherein the dividing step
2 interleaves each of the plurality of first sections in an
3 alternating manner with each of the plurality of second
4 sections.

1 21. The method of claim 19, wherein the calculating step splits
2 the identifier into m parts such that each of the m parts
3 comprises information related to the identifier.

1 22. The method of claim 21, wherein a set of m second sections
2 form a group, and each second section within the group is
3 watermarked with a unique one of the m parts of the identifier.

1 23. The method of claim 19, wherein the identifier is
2 calculated as a hash of the data contained in the plurality of
3 first sections.

1 24. The method of claim 19, further comprising the verification
2 steps of:

3 reading the plurality of first sections and calculating a
4 first verification identifier from data contained in the
5 plurality of first sections;

6 reading at least one watermark from the plurality of second
7 sections;

8 determining a second verification identifier from the at
9 least one watermark; and

10 comparing the first verification identifier and the second
11 verification identifier.

1 25. The method of claim 24, wherein the step of reading the at
2 least one watermark reads m watermarks from a first group of
3 second sections, and wherein the step of determining the second
4 verification identifier coalesces the m watermarks.

1 26. The method of claim 24, comprising the further step of
2 aborting processing of the digital recording when the first

- 3 verification identifier and the second verification identifier
- 4 are not equal.

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1 27. A watermarked digital recording having a plurality of
2 tracks, comprising:
3 a plurality of first sections interleaved with a plurality
4 of second sections, wherein the second sections include
5 watermark information relating to data contained in the first
6 sections.

1 28. The watermarked digital recording of claim 27, wherein the
2 second sections are clustered into groups, and the watermark
3 information in each group can be coalesced to generate an
4 identifier that equals a hash of the data contained in the first
5 sections.